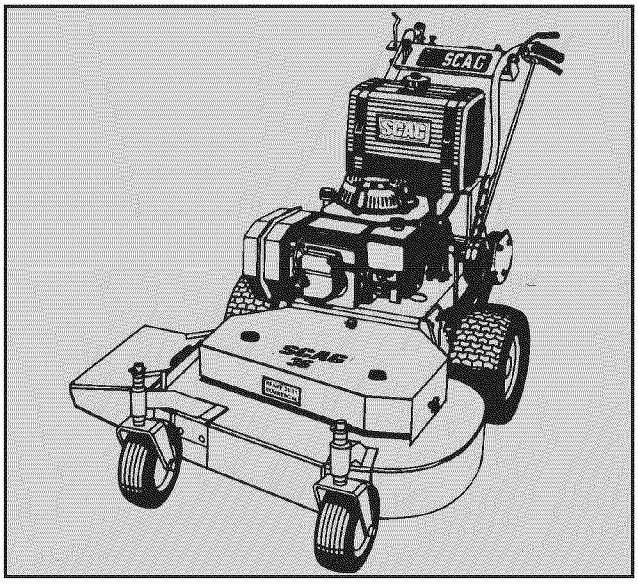
SCAG®
POWER EQUIPMENT

OPERATOR'S MANUAL

MODEL SW



THIS MANUAL CONTAINS THE OPERATING INSTRUCTIONS AND SAFETY INFORMATION FOR YOUR SCAG MOWER. READING THIS MANUAL CAN PROVIDE YOU WITH ASSISTANCE IN MAINTENANCE AND ADJUSTMENT PROCEDURES TO KEEP YOUR MOWER PERFORMING TO MAXIMUM EFFICIENCY. THE SPECIFIC MODELS THAT THIS BOOK COVERS ARE CONTAINED ON THE INSIDE COVER. BEFORE OPERATING YOUR MACHINE, PLEASE READ ALL THE INFORMATION ENCLOSED.

PART NUMBER 03072

⚠ WARNING:

FAILURE TO FOLLOW SAFE OPERATING PRACTICES MAY RESULT IN SERIOUS INJURY.

* Keep all shields in place, especially the grass discharge chute.
* Before performing any maintenance or service, stop the machine and remove the spark plug wire and ignition key.
* If a mechanism becomes clogged, stop the engine before cleaning.
* Keep hands, feet and clothing away from power-driven parts.
* Read this manual completely as well as other manuals that came with your mower.
* Keep others off the tractor (only one person at a time)

REMEMBER - YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the equipment.

This manual covers the operating instructions and illustrated parts list for:

SW32-13KA	**with a serial number of 5010001 to 5019999**
SW36-13KA	**with a serial number of 5020001 to 5029999**
SW36-13KH	**with a serial number of 5030001 to 5039999**
SW36-14KA	**with a serial number of 5800001 to 5809999**
SW48-14KA	**with a serial number of 5040001 to 5049999**
SW48-15KH	**with a serial number of 5050001 to 5059999**
SW48-17KA	**with a serial number of 5060001 to 5069999**
SW48A-17KA	**with a serial number of 5070001 to 5079999**
SW52-17KA	**with a serial number of 5080001 to 5089999**

Always use the entire serial number listed on the serial number tag when referring to this product.

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POWER EQUIPMENT

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Outdoor Power Equipment OPE CERTIFIED Technician
WE SUPPORT OPE TECHNICIAN CERTIFICATION

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INTRODUCTION

Your mower was built to the highest standards in the industry. However, the prolonged life and maximum efficiency of your mower depends on you following the operating, maintenance and adjustment instructions in this manual.

We encourage you to contact your dealer for repairs. All Scag dealers are informed of the latest methods to service this equipment and provide prompt and efficient service in the field or at their service shop. They carry a full line of Scag service parts.

A replacement Operator's Manual is available from your Scag Servicing Dealer or by contacting Scag Power Equipment, Service Department at P.O. Box 152, Mayville, WI 53050. Please indicate the complete model and serial number of your Scag product.

USE OF OTHER THAN ORIGINAL SCAG REPLACEMENT PARTS WILL VOID THE WARRANTY.

The "Right" and "Left", "Front" and "Rear" of the machine are referenced from the operator's perspective when in the normal operating position and facing the forward travel direction.

GENERAL SAFETY INSTRUCTIONS

READ THIS OPERATOR'S MANUAL and instructions furnished with attachments.

Perform only those maintenance procedures described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Scag Dealer. To ensure optimum performance and safety, always purchase genuine SCAG replacement parts and accessories.

Your safety and the safety of others depends significantly upon your knowledge and understanding of all correct operating practices and procedures of this machine.

SIGNAL WORDS

This symbol means **"Attention! Become Alert! Your Safety is Involved!".** The symbol is used with the following signal words to attract your attention to safety messages found on the decals and throughout this manual. The message that follows the symbol contains important information about safety. To avoid injury and possible death, carefully read the message! Be sure to fully understand the causes of possible injury or death.

Signal Word:

It is a distinctive word on safety decals and throughout this manual that alerts the viewer to the existence and relative degree of the hazard.

⚠DANGER:

The signal word "DANGER" denotes that an extremely hazardous situation exists on or near the machine that could result in high probability of death or irrepairable injury if proper precautions are not taken.

⚠WARNING:

The signal word "WARNING" denotes that a hazard exists on or near the machine that can result in injury or death if proper precautions are not taken.

⚠CAUTION:

The signal word "CAUTION" is a reminder of safety practices on or near the machine that could result in personal injury if proper precautions are not taken.

BEFORE OPERATING

1. Know the controls and how to stop quickly.

2. Do not allow children to operate the machine. Do not allow adults to operate the machine without proper instruction.

3. Remove all debris or other objects that might be picked up and thrown by the cutter blades. Keep all bystanders away from the mowing area.

4. Keep all shields, safety devices, and decals in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operating. Also, check all nuts, bolts and screws for proper tightness, to assure the machine is in safe operating condition.

5. Do not operate the machine while wearing sandals, tennis shoes, sneakers or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses and safety shoes is advisable and required by some local ordinances and insurance regulations.

6. Fill the fuel tank with clean, fresh gasoline, with a minimum octane rating of 87. Avoid spilling gasoline. Gasoline is highly flammable, handle it carefully.
   A. Use an approved gasoline container.
   B. Do not fill the tank while the engine is hot or running.
   C. Do not smoke while handling gasoline.
   D. Fill the fuel tank outdoors and up to approximately 1" (25 mm) below the bottom of the filler neck.
   E. Wipe up any spilled gasoline.

7. Before attempting to start the engine, shift the transmission into neutral, move the blade engagement switch to the OFF position, and move the neutral latches to neutral.

WHILE OPERATING

1. Start the engine when the neutral latches are in the neutral lock position, the cutter blades are disengaged, and the transmission is in neutral.

2. Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.

3. Using the machine demands attention. To prevent loss of control:
   A. Mow only in daylight or when there is good artificial light.
   B. Watch for holes or other hidden hazards.
   C. Do not drive close to a drop-off, ditch, creek bank, or other hazard.
   D. Reduce speed when making sharp turns and when turning on hillsides.
   E. Always be sure of your footing. Keep a firm hold on the handles and walk---never run.
   F. Do not operate where conditions are slippery.

4. The discharge chute must always be installed and in the down position on the side discharge cutter deck except when the Scag optional grass catcher or mulching plate are properly installed. If the discharge area should plug, shut the engine off and wait for all movement to stop before removing the obstruction.

5. Disengage the blades and wait for them to stop before crossing gravel drives, walks or roads.

6. Shut the engine off and wait until the blades come to a complete stop before removing the grass catcher container.

7. Never raise the cutter deck while the blades are rotating.

8. Always park the mower and/or start the engine on a level surface.

9. If the cutting blades should strike a solid object or the equipment should start to vibrate abnormally, stop the engine, disconnect the spark plug wire, and check immediately for the cause. Vibration is generally a warning of trouble. Check the machine for damaged or defective parts. Repair any damage before starting the engine or operating the cutter deck. Be sure the blades are in good condition and the blade bolts are tight.

10. Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing directions on slopes.

⚠WARNING:

DO NOT operate on steep slopes. To check a slope, attempt to back up it (with the cutter deck down). If the machine can back up the slope without the wheels slipping, reduce speed and use extreme caution. ALWAYS FOLLOW OSHA APPROVED OPERATION.

11. Do not touch the engine or muffler while the engine is running or soon after it is stopped. These areas could be hot enough to cause a burn.

12. Before leaving the operator's position or leaving the mower unattended, shift the transmission into neutral, place the neutral latches in the neutral lock position, and move the blade engagement switch to OFF. Shut the engine OFF and remove the key.

13. Do not pass or stand on the grass discharge side of any mower with the engine running. Stop operation when another person approaches.

14. Use only Scag approved riding attachments.

    Scag Approved Riding Attachments:
    RS-2
    RS-ZT
    Using unapproved attachments, (especially "stand-up" riding attachments) may be hazardous.

MAINTENANCE AND STORAGE

1. Disconnect the spark plug wire from the spark plug to prevent accidental starting of the engine when servicing, adjusting or storing the machine.

2. If the mower must be tipped to perform maintenance or adjustment, remove the battery, drain the gasoline from the fuel tank and the oil from the crankcase.

3. To reduce potential fire hazard, keep the engine free of excessive grease, grass, leaves and accumulations of dirt.

4. Be sure the machine is in safe operating condition by keeping nuts, bolts, and screws tight. Check the blade mounting bolts and nuts frequently to be sure they are tightened.

5. If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing and other parts of the body away from the cutter deck blades and other moving parts.

6. Do not overspeed the engine by changing governor settings. To be sure of safety and accuracy, have an authorized dealer check maximum engine speed with a tachometer.

7. The engine must be shut off before checking the oil or adding oil to the crankcase.

8. Allow the engine to cool before storing the mower in any enclosure such as a garage or storage shed. Make sure the fuel tank is empty if the machine is to be stored in excess of 30 days. Do not store the mower near any open flame or where gasoline fumes may be ignited by a spark.

9. Always store gasoline in a safety-approved, red container.

10. Be careful when servicing the battery as it contains acid, which is corrosive and could cause burns to skin and clothing.

11. Batteries release explosive gases when being charged or discharged. Keep batteries away from any source of sparks and/or flame.

INITIAL RUN-IN PROCEDURES (FIRST DAY OF USE OR APPROXIMATELY 10 HOURS)

1. Check the belts for proper tension at 2, 4 and 8 hours. Adjust as needed.

2. Check the steering control rods for neutral adjustment. (See Adjustments, page 6)

3. Check the tires for proper pressure.
   Caster Wheels 25 psi.
   Drive Wheels 15 psi.

4. Check for loose hardware. Tighten as needed.

5. Check the safety switches for proper adjustment:
   * The engine will crank, but not start if the machine is not in neutral.
   * On electric start machines, the engine will not crank if the PTO switch is on.
   * The engine should crank and start if the machine is in neutral and the PTO engagement switch is OFF.

6. Apply lubricant to all the grease fittings. Lubricant was applied at the factory. This is just a precautionary check to make sure that all the fittings have been lubricated.

MOWER OPERATION

1. Read and understand the safety instructions before attempting to operate this machine.

2. Before starting the engine:

   * Check the oil level in the engine.
   * Fill the fuel tank with clean, fresh, lead-free gasoline.
   * Open the fuel valve on the bottom of the fuel tank.

-NOTE-

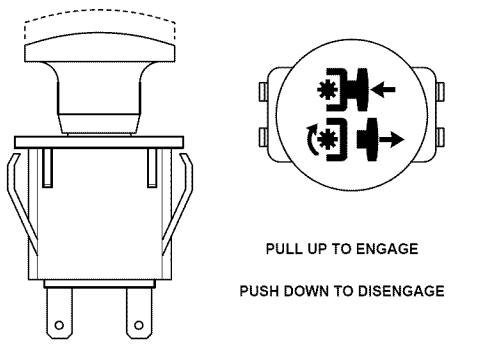
Use gasoline with an octane rating no less than 87.

   * The transmission must be in NEUTRAL.
   * The blade clutch switch must be in the OFF position.
   * The operator's presence levers must be released.
   * The neutral latches must be in the neutral lock position.
   * The key switch must be on.

3. Start the engine:

   * Choke as required. If the engine is cold, pull the choke knob out. When the engine starts, slowly push the choke in. If the engine stalls, repeat the above operation. When the engine is warm, choking may not be necessary.

4. Engage the cutter blades by pulling the blade clutch switch into the ON position. Push the switch to the OFF position to disengage the cutter blades.



-NOTE-

When PTO is engaged or (possibly) disengaged, a squealing sound from the underside of the machine is normal. It is caused by the electric clutch plates meshing as the cutter blades come up to speed. For best equipment life, engage the clutch with the engine at 1/2 throttle, not under full load.

⚠WARNING:

To avoid serious bodily injury and damage to the transmission, the machine must be at a full stop before shifting between gears or shifting between forward and reverse.

5. Shift the transmission into gear for the desired mowing speed.

-NOTE-

Top speed is suggested only for transport!

6. While squeezing the steering brake levers with both hands, release both neutral latches.

7. When the steering brake levers are released, the machine will travel straight. To make a right turn, squeeze the RH lever. To turn left, squeeze the LH lever.

8. TO STOP, squeeze both levers, lock the neutral latches, and shift the transmission into neutral.

CUTTER DECK BELT ADJUSTMENTS

1. Remove the belt cover.

2. Adjust the cutter deck drive belt using a belt tension gauge. Adjust the belt so that the belt moves 1/2" with 10 pounds of pressure. Adjust the tension by tightening or loosening the J-bolt nut. (See figure 1)

-NOTE-

Due to initial belt stretch and to prevent the belt from slipping, check this adjustment after the first 2 hours, 4 hours and 8 hours of operation.

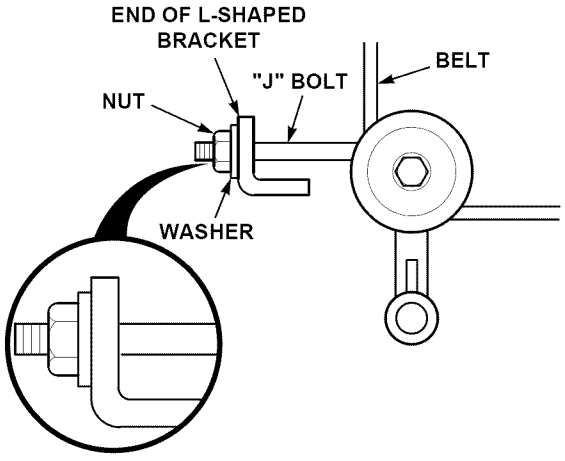


Figure 1

3. Adjust the RH blade drive belt using a belt tension gauge. Adjust the belt so that the belt moves 1/2" with 10 pounds of pressure. Adjust the tension by tightening or loosening the J-bolt nut. (See figure 2 & 3)

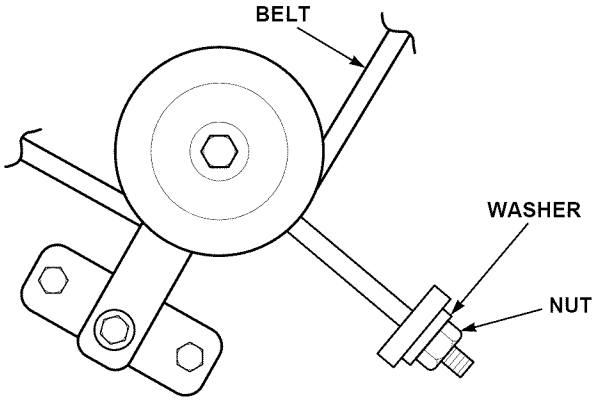


Figure 2. RH Blade Belt Adjustment

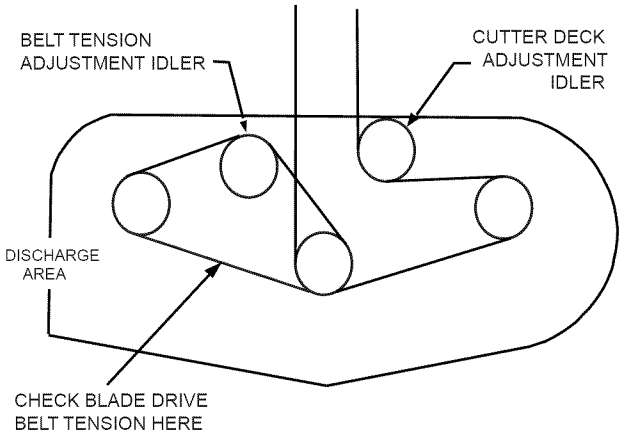


Figure 3. Cutter Deck Belts

TRANSMISSION DRIVE BELT

Adjust the transmission drive belt so that there is about a 3/16" deflection with 10 lbs. of pressure. Adjust by loosening idler pulley mounting bolt and sliding the idler left or right to change belt tension.

DRIVE CONTROL ADJUSTMENTS

1. Adjust the steering control rods so that there is approximately 3/4" clearance from the bottom of the rod to the bottom of the neutral latch slot when in the drive position. (See figure 4)

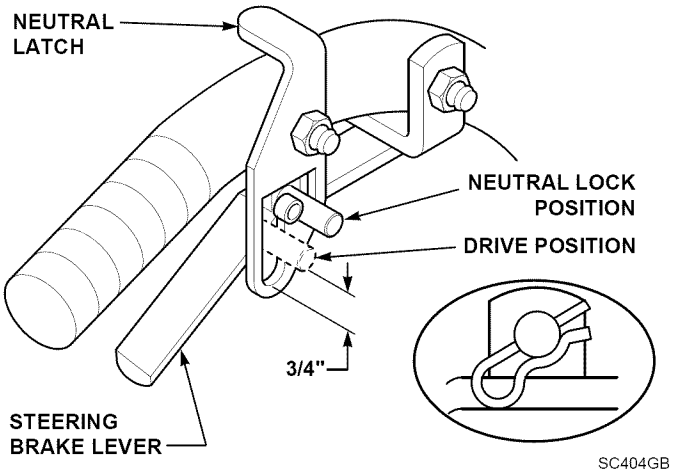


Figure 4. Steering Control Rod Adjustment

2. Adjust the steering brake rods so that the brakes do not apply until the steering levers are pulled tight to the handles. When the steering levers are locked in the neutral position the machine should move freely.

CUTTER DECK ADJUSTMENTS

Due to the many cutting conditions that exist, it is difficult to suggest a cutter deck setting that will work for every lawn. There are two adjustments that can be made on these decks, pitch and height.

PITCH is the angle of the blades (comparing front to rear). A 1/4" downward pitch (front of deck down) is recommended for best cutting performance.

HEIGHT is the nominal distance the blade is off of the ground. This measurement is made with the blades pointed side to side and distance is measured between cutting tip and ground. (Also see Blade Height Adjustment, next page)

Changes to the cutting height can be achieved by repositioning the cutter deck (This adjustment will also effect the pitch of the deck). There are three available positions (see figure 5).

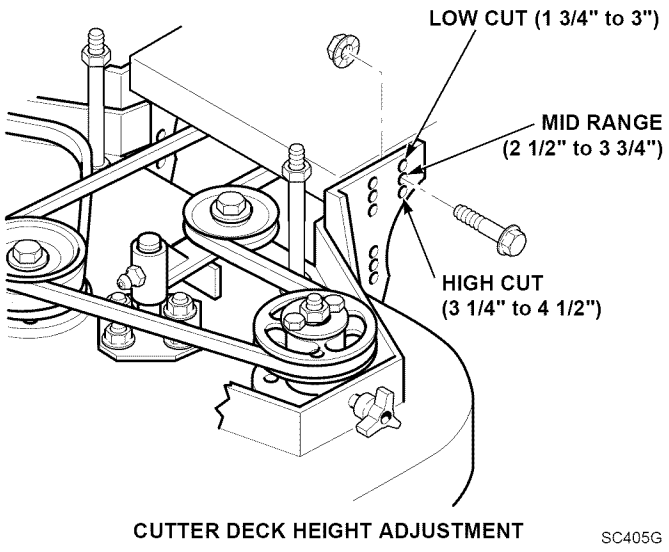


Figure 5. Cutting Height Adjustment

Caster spacers also can be repositioned to change cutting heights and to change the pitch of the deck. (See figure 6)

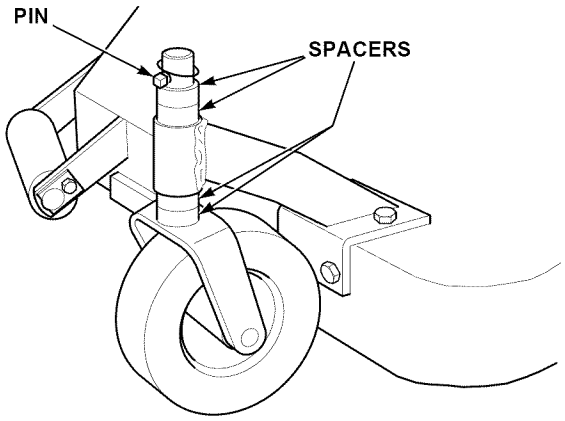


Figure 6. Caster Wheel Spacers

BLADE HEIGHT ADJUSTMENT

Adjusting the blade height can be done by moving any number of the five smaller 1/4" spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft.

-NOTE-

All blades should be positioned equally.

For best cut and discharge, a minimum of three spacers should be installed between the blade and the spindle. (See figure 7)

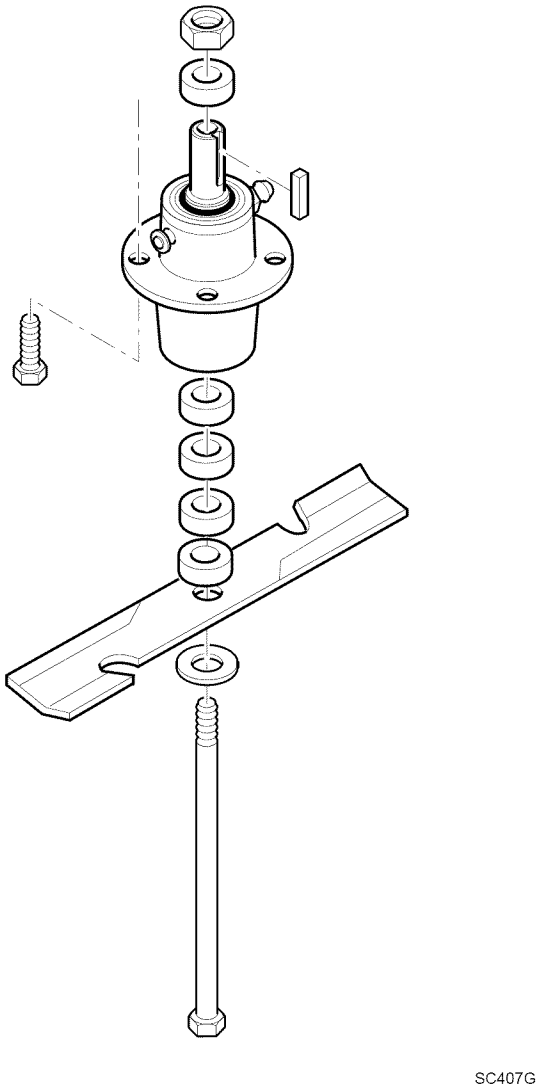


Figure 7. Blade Spacers

CUTTER BLADES

Do not sharpen beyond 1/3 of the width of the blade. (See figure 8)

-NOTE-

Dress the blade with a file. Using a wheel grinder may burn the blade. Check the balance of the blade. If blades are out of balance, vibration and premature wear of spindle assembly can occur. See your authorized Scag dealer for blade balancing or special tools if you choose to balance your own blades.

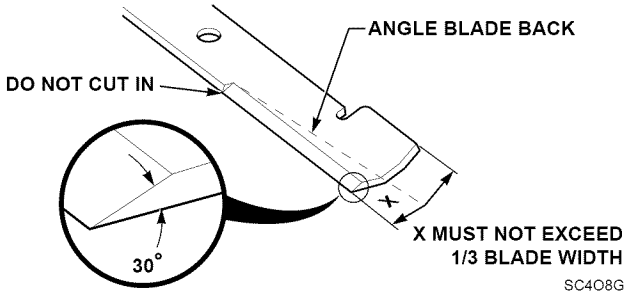


Figure 8. Blade Sharpening

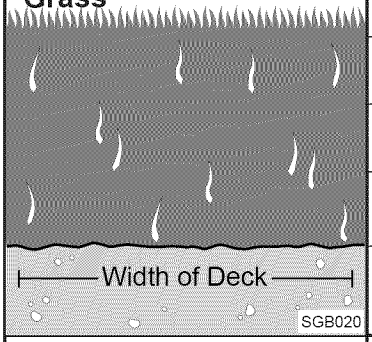
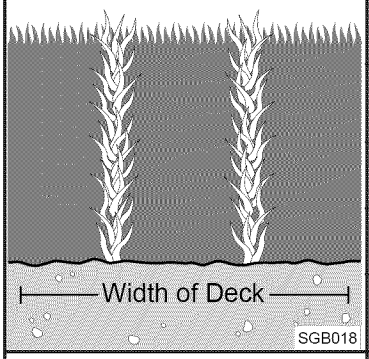
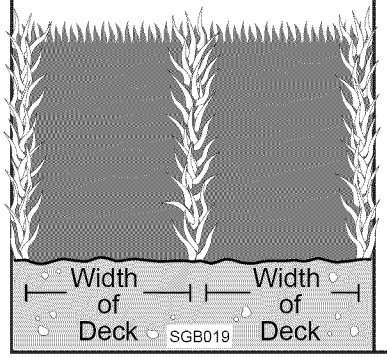
LUBRICATION & MAINTENANCE

+ Grease spindle until grease comes out the relief valve.

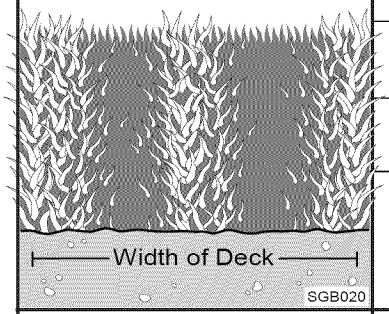
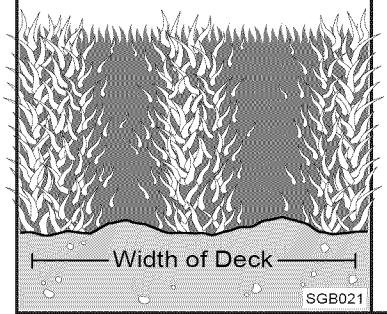
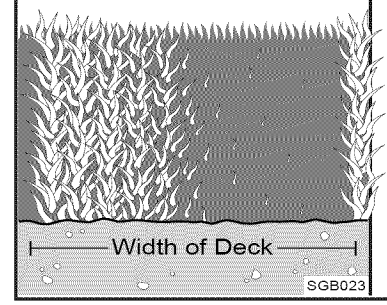
Compatible Greases:
- Lidok EP #2 (found at industrial shops)
- Ronex MP (Exxon service stations)
- Shell Alvania (Shell service stations)
- Mobilux #2 (Mobil service stations)
- Super Lub M EP #2 (Conoco service stations)

BREAK-IN	8 HOURS (DAILY)	40 HOURS (WEEKLY)	100 HOURS (BIWEEKLY)	500 HRS OR ANNUALLY	PROCEDURE	COMMENTS
X					Check all hardware for proper tightness	
X					Change engine oil and filter at 5 hours	
	X				Check engine oil	Do not over fill
	X				Remove debris from under belt cover	More often if needed
	X				Sharpen cutter blades	More often if needed
	X				Grease spindle bearings	+ US Lithium MP White Grease 2125
	X				Clean air filter	More often if needed
	X				Check belt tension	
	X				Check tire pressure	Add or adjust as required
		X			Change engine oil	See engine mfg. information
			X		Replace air filter	More often if needed
			X		Grease caster wheel bearings	Chassis grease
			X		Grease caster wheel pivot shafts	Chassis grease
			X		Grease idler pulley bracket on cutter deck	Chassis grease
			X		Grease drive wheel bearings	Chassis grease
			X		Grease transmission couplers	Chassis grease
			X		Grease idler bracket LH & RH	Chassis grease
			X		Check all hardware for proper tightness	More often if needed
				X	Adjust air gap on electric clutch	Contact your Scag dealer for information about making this adjustment

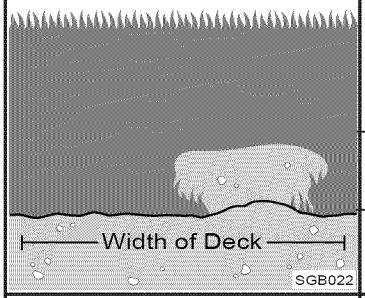
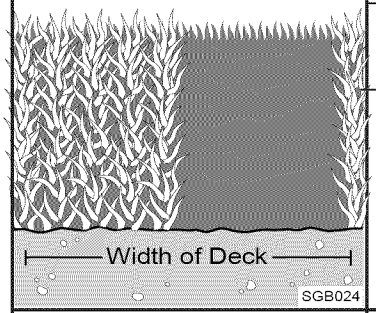
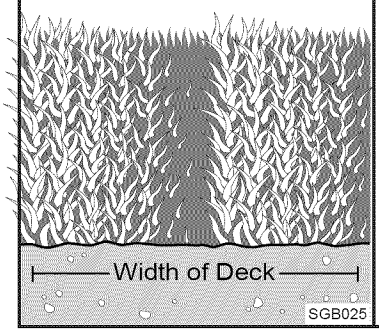
TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
Stringers - Occasional Blades of Uncut Grass 	Low engine RPM	Run engine at full 3600 RPM
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
	Dull blades, incorrect sharpening	Sharpen blades
	Deck plugged, grass accumulation	Clean underside of deck
	Belts slipping	Adjust belt tensions
Streaking - Strips of Uncut Grass in Cutting Path 	Dull, worn blades	Sharpen blades
	Incorrect blade sharpening	Sharpen blades
	Low engine RPM	Run engine at full 3600 RPM
	Belt slipping	Adjust belt tension
	Deck plugged, grass accumulation	Clean underside of deck
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
	Bent blades	Replace blades
Streaking - Strips of Uncut Grass Between Cutting Paths 	Not enough overlapping between rows	Increase the overlap of each pass

TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
Uneven Cut on Flat Ground - Wavy High-Low Appearance, Scalloped Cut, or Rough Contour 	Lift worn off of blade	Replace blade
	Blade upside down	Mount with cutting edge toward ground
	Deck plugged, grass accumulation	Clean underside of deck
	Too much blade angle (deck pitch)	Adjust pitch and level
	Deck mounted improperly	See your authorized SCAG dealer
	Bent spindle area	See your authorized SCAG dealer
	Dull blade	Sharpen blade
Uneven Cut on Uneven Ground - Wavy Appearance, High-Low Scalloped Cut, or Rough Contour 	Uneven ground	May need to reduce ground speed, raise cutting height, and/or change direction of cut
Sloping Ridge Across Width of Cutting Path 	Tire pressures not equal	Check and adjust tire pressure
	Wheels uneven	Check and adjust tire pressure
	Deck mounted incorrectly	See your authorized SCAG dealer

TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
Scalping - Blades Hitting Dirt or Cutting Very Close to the Ground 	Low tire pressures	Check and adjust pressures
	Ground speed too fast	Slow speed to adjust for conditions
	Cutting too low	May need to reduce ground speed, raise cutting height, change direction of cut, and/or change pitch and level
	Rough terrain	May need to reduce ground speed, raise cutting height, and/or change direction of cut
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
Step Cut Ridge in Center of Cutting Path 	Blades not mounted evenly	Adjust pitch and level
	Bent blade	Replace blade
	Internal spindle failure	See your authorized SCAG dealer
	Mounting of spindle incorrect	See your authorized SCAG dealer
Slope Cut - Sloping Ridges Across Width of Cutting Path 	Bent spindle mounting area	See your authorized SCAG dealer
	Internal spindle failure	See your authorized SCAG dealer
	Bent deck housing	See your authorized SCAG dealer

SCAG

TECHNICAL SPECIFICATIONS

MODELS	SW32-13KA, SW36-13KA, SW36-13KH, SW36-14KA, SW48-14KA, SW48-15KH, SW48-17KA, SW48A-17KA, SW52-17KA
ENGINE	
General Type:	Heavy duty industrial/commercial
Brand / Model:	Kawasaki FB460V, FC420V, & FH500V: Kohler CV13, CV15T
Horsepower:	Kawasaki FB460V=13 HP, FC420V=14HP, FH500V=17HP Kohler CV13T=13HP, CV15T=15 HP
Type:	Kawasaki 13 HP, 14 HP, 4 cycle gasoline engine, air cooled, single cylinder, vertical shaft engine. 17HP 4 cycle, air cooled, V twin cylinder, verticl shaft engine. Kohler 13 HP & 15 HP = 4 cycle gasoline engine, air cooled, single cylinder, vertical shaft engine.
Displacement:	Kaw. 13 HP=460cc, 14 HP=423cc: 17HP=494cc Kohler 13 HP=398cc, 15 HP=426cc:
Governor:	Mechanical type governor with variable speed control. Settings: Kawasaki 13 HP= 3350 rpm (+/- 75 rpm), 14 HP=3600 rpm (+/- 75rpm), idle set at 1200 rpm (+/- 75 rpm), 17HP=3600 rpm, idle set at1550 rpm (+/- 75 rpm) Kohler 13 HP & 15 HP=3600 rpm (+/- 50 rpm), idle set at 1200 rpm (+/ - 75 rpm)
Air Cleaner:	Large capacity duel element with cyclonic-type air filter.
Exhaust:	Single & dual exhaust canister muffler.
Starter/Electrical:	Electronic ignition with recoil starter.
Fuel Pump Group:	Varied - See manufacturer's specification.
Oil Pump Group:	Varied - See manufacturer's specification.
Valve Group:	Varied - See manufacturer's specification.
ENGINE DECK	
Thickness:	7 gauge steel.
Fuel Tank:	5 gallon (19.0 liters) seamless polyethylene.
Drive Wheels/Tires:	13.0 x 6.50-6 two-ply pneumatic tubeless.
Handle Bars:	1-1/4" diameter.
DRIVE SYSTEM	
Type:	Belt drive with twin power belts for increased friction to pulley surface.
Transmissions:	Peerless 5-speed transmission, Model #700-070A.
Steering/Travel Control:	Clutch/brake fingertip steering, key lock switch. (EZ Grip design allows minimum hand force to operate controls.)
Brakes:	6" drum, band brake, one on each wheel.
Axles:	1"
Wire Harness:	14 gauge wire.
Safety Group:	Hand actuated operator presence system with blade clutch and transmission interlock to engine kill.
Forward Speed Range:	0 to 6.0 mph
Reverse Speed Range:	0 to 2.0 mph

Date of Issue: June 15, 1999

Specifications Subject to Change Without Notice

TECHNICAL SPECIFICATIONS (CON'T)

CUTTER DECK	SWM 32, SWM 36, SWM 48, SWM48A, SWM 52
Type:	Out-front design with anti-scalp rollers.
Construction:	SWM32-48: 7-gauge steel with 7-gauge (3/16") steel skirt SWM52:10-gauge steel with 7-gauge (3/16") steel skirt
True Cutting Width:	SWM32=32.0" (81.3cm), SWM36=36.0" (90.2cm), SWM48=48.0" (122.0cm), SWM48A=(122.0cm), SWM52=52.0" (132.0cm)
Blade Engagement:	Electric blade engagement clutch with control panel switch
Cutting Height Adjustment:	Manual adjustment 1-3/4" to 4-1/2" in 1/4" increments.
Cutter Blades:	.204" thick, milled edge, 5150 alloy steel SWM32 = Two (2) 16.5" blades, SWM36 = Two (2) 18" blades, SWM48 = Three (3) 16.5" blades, SWM52 = Three (3) 18" blades
Discharge Opening:	SWM32, 36, 52 Extra wide 11.5", SWM48 Extra wide 13.5",
Caster Wheels:	9.4 x 3.5 smooth-tread flotation, inner tubes, split rims, roller bearings, with quick pin removal.
Spindles:	Cast housing, taper roller bearing, low maintenance with top access grease fitting and grease overfill relief poppet.
Spindle Pulleys:	Cast-iron with easily removed taper hubs
Cutter Deck Belts:	B-section with Kevlar® cord.

ADDITIONAL SPECIFICATIONS

OPTIONAL ITEMS/ATTACHMENTS

Fabric Grass Catcher:	GC-F4 Grass Catcher with 4 cubic ft. capacity
Metal Grass Catcher:	GC-4D Grass Catcher with 4 cubic ft. capacity and rope pull dump or pick-up and dump.
Sulky:	RS-2 Two-Wheel Sulky with padded seat. RS-ZT Two-Wheel Zero Turn Sulky with padded seat.
Mulching Plate:	Steel plate fits over discharge opening. No blade change or removal required. Installs and removes in the field.
EZ-GRIP-SW	Provides reduced hand force at operator steering controls.

APPROXIMATE DIMENSIONS	SWM32	SWM36	SWM48	SWM48A	SWM52
Length:	70.0"	72.0"	76.0"	76.0"	76.0"
Length with grass catcher:	70.0"	72.0"	76.0"	76.0"	76.0"
Tracking Width:	32.0"	37.0"	37.0"	37.0"	37.0"
Width:	43.0"	48.0"	60.0"	60.0"	60.0"
Width (with discharge chute up):	33.0"	38.0"	50.0"	50.0"	53.0"
Width with grass catcher:	51.0"	56.0"	68.0"	68.0"	71.0"
Height:	40.5"	40.5"	40.5"	40.5"	40.5"
Height with grass catcher:	40.5"	40.5"	40.5"	40.5"	40.5"
Weight:	440 lbs.	465 lbs.	515 lbs.	515 lbs.	525 lbs.
Weight with GC-F4 grass catcher:	480 lbs.	505 lbs.	555 lbs.	555 lbs.	565 lbs.
Weight with GC-4D grass catcher:	490 lbs.	515 lbs.	565 lbs.	565 lbs.	575 lbs.

Date of Issue: June 15, 1999
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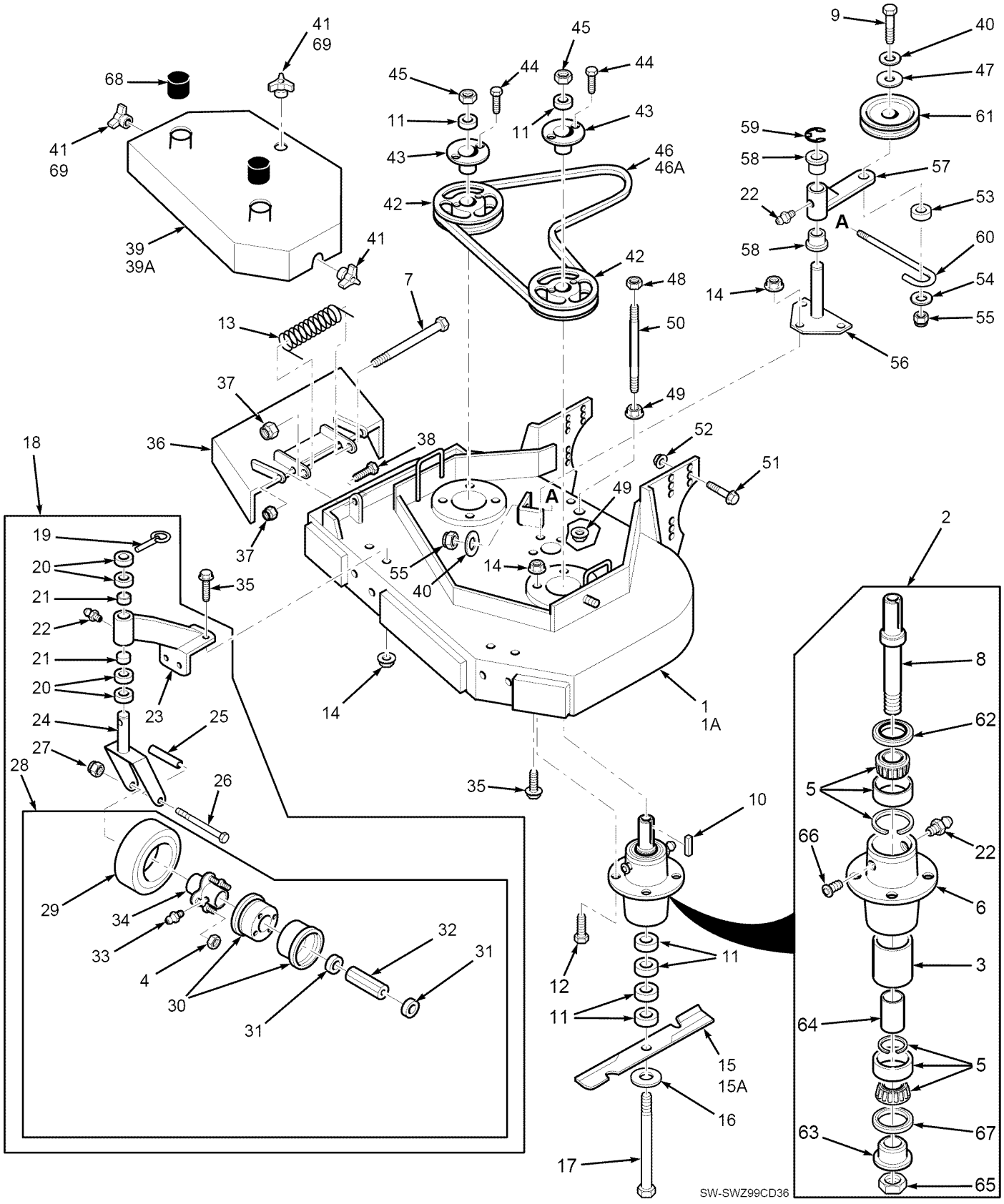
32" & 36" CUTTER DECKS

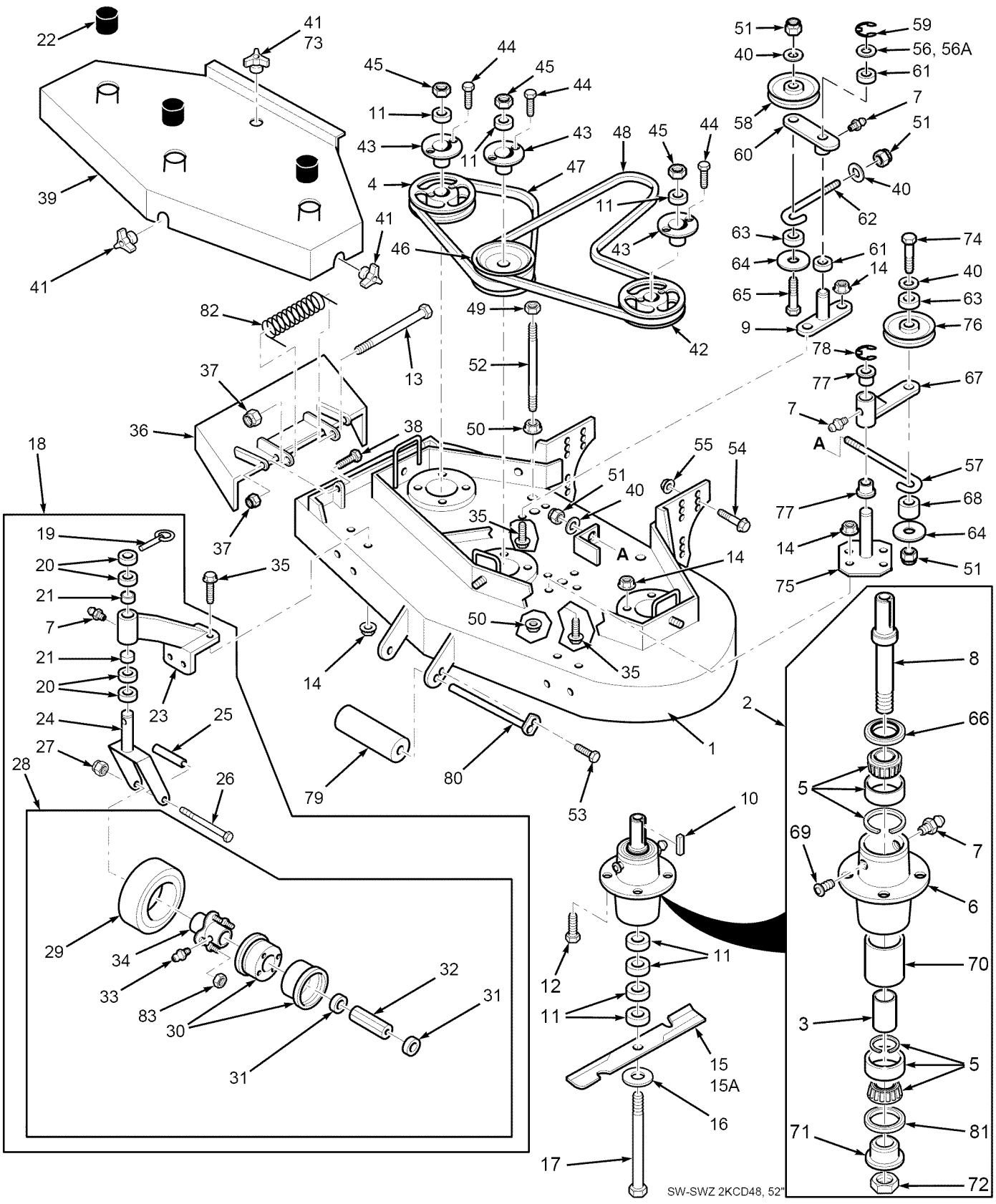


32" & 36" CUTTER DECKS

Ref. No.	Part Number	Description	32	36
1	461130	Cutter Deck (Includes Decals)	x	
1A	461131	Cutter Deck (Includes Decals)		x
2	46631	Cutter Spindle Assy.	x	x
3	43312	Spacer, Outside	x	x
4	48307-08	Tapered Nut, 5/16-24	x	x
5	481022	Tapered Bearing (Two)	x	x
6	43294	Spindle Housing	x	x
7	04001-108	Bolt, 5/16-18 x 4-1/4" Hex Head	x	x
8	43298	Spindle Shaft	x	x
9	04001-77	Bolt, 3/8-16 x 3-1/2" Hex Head	x	x
10	04063-08	Key, 1/4 x 1/4 x 2"	x	x
11	43278	Spacer, Cutter Blade - Small	x	x
12	04001-10	Bolt,5/16-18 x 1-1/4" Hex Head	x	x
13	481050	Spring, Chutte Return	x	x
14	04019-03	Nut 5/16-18 Serrated Flange	x	x
15	481706	Cutter Blade, 16-1/2" Marbain	x	
15	481707	Cutter Blade, 18" Marbain		x
15A	481710	Cutter Blade 16-1/2 Hi Lift Marbain	x	
15A	481711	Cutter Blade, 18 Hi Lift Marbain		x
16	04040-10	Flatwasher, 5/8 W	x	x
17	04001-41	Hex Hd. Bolt, 5/8-11 x 9-1/2"	x	x
18	46079	Caster Assembly (Inc.19-28)	x	x
19	04066-01	Quick Pin	x	x
20	43037-01	Spacer, Caster Yoke, 1/2" long	x	x
21	48100-01	Bronze Bearing	x	x
22	48114-04	Grease Fitting	x	x
23	46082	Support Assembly (Inc. 21-23)	x	x
24	45006	Caster Yoke	x	x
25	43022	Sleeve, Caster Wheel Bearing	x	x
26	04001-37	Hex Hd. Bolt, 1/2-13 x 5-1/2"	x	x
27	04021-07	Elastic Stop Nut, 1/2-13	x	x
28	48307	Wheel Assy. (Inc.4, 29-34)	x	x
29	48307-02	Tire only, Caster Wheel	x	x
NS	48006-03	Inner Tube only	x	x
30	48307-04	Rim Pair, Caster Wheel	x	x
31	48006-07	Retainer, Bearing, Caster Wheel	x	x
32	48006-06	Roller Bearing, Caster Wheel	x	x
33	48114-03	Grease Fitting, 45 degree 1/4-28	x	x
34	48006-05	Hub Assembly	x	x
35	04017-16	Cpscrw,5/16-18 x 3/4" Ser.Flg. Hex Head	x	x
36	461054	Discharge Chute	x	x
37	04021-10	Hex Nut, 5/16-18 Elastic Stop	x	x
38	04001-09	Hex Hd Bolt, 5/16-18 x 1"	x	x
39	46853	Belt Cover Assy (Includes Decal)	x	
39A	46797	Belt Cover Assy (Includes Decal)		x
40	04041-07	Flat Washer, 3/8" Special	x	x
41	04029-03	Wing Nut, 3/8-16	x	x
42	48924	Pulley	x	x
43	48926	Tapered Hub	x	x
44	04001-01	Hex Hd. Bolt, 1/4-20 x 3/4"	x	x
45	04020-09	Hex Nut, 5/8-11	x	x
46	48278	Belt, Blade Drive	x	
46A	48204	Belt, Blade Drive		x
47	43077	Spacer	x	x
48	04021-05	Hex Nut, 3/8-16 Center Locknut	x	x
49	04019-04	Nut, 3/8-16 Serrated Flange	x	x
50	04004-02	Support, Belt Cover	x	x
51	04017-42	Cpscrw, 7/16-14 x 1"Ser.Flg. HH	x	x
52	04019-05	Nut, 7/16-14 Serrated Flange	x	x
53	43277	Spacer, J-Hook	x	x
54	04041-12	Washer, 3/8 x 1-1/2 x 16 GA	x	x
55	04021-09	Elastic Stop Nut, 3/8-16	x	x
56	45423	Idler Pivot	x	x
57	46748	Idler Arm Assy. (Inc. 22 & 58)	x	x
58	48100-02	Bronze Bearing	x	x
59	04050-05	Retaining Ring, 1-1/8" Ext. "E"	x	x
60	44078	J-Hook	x	x
61	48269	Idler Pulley, Belt Clutch	x	x
62	481024	Seal, Cutter Spindle	x	x
63	43297	Spindle Bushing	x	x
64	43296	Spacer, Inside	x	x
65	481035	Nut,	x	x
66	48677	Relief Fitting, Cutter Spindle	x	x
67	481025	Seal, Cutter Spindle	x	x
68	48098	Spindle Shield	x	x
69	04029-04	Wing Nut, 3/8-16 (Small) RH side	x	x

* Common hardware which should be purchased locally. All bolts are Grade 5 plated, all other fasteners zinc plated.

48, 52" CUTTER DECKS

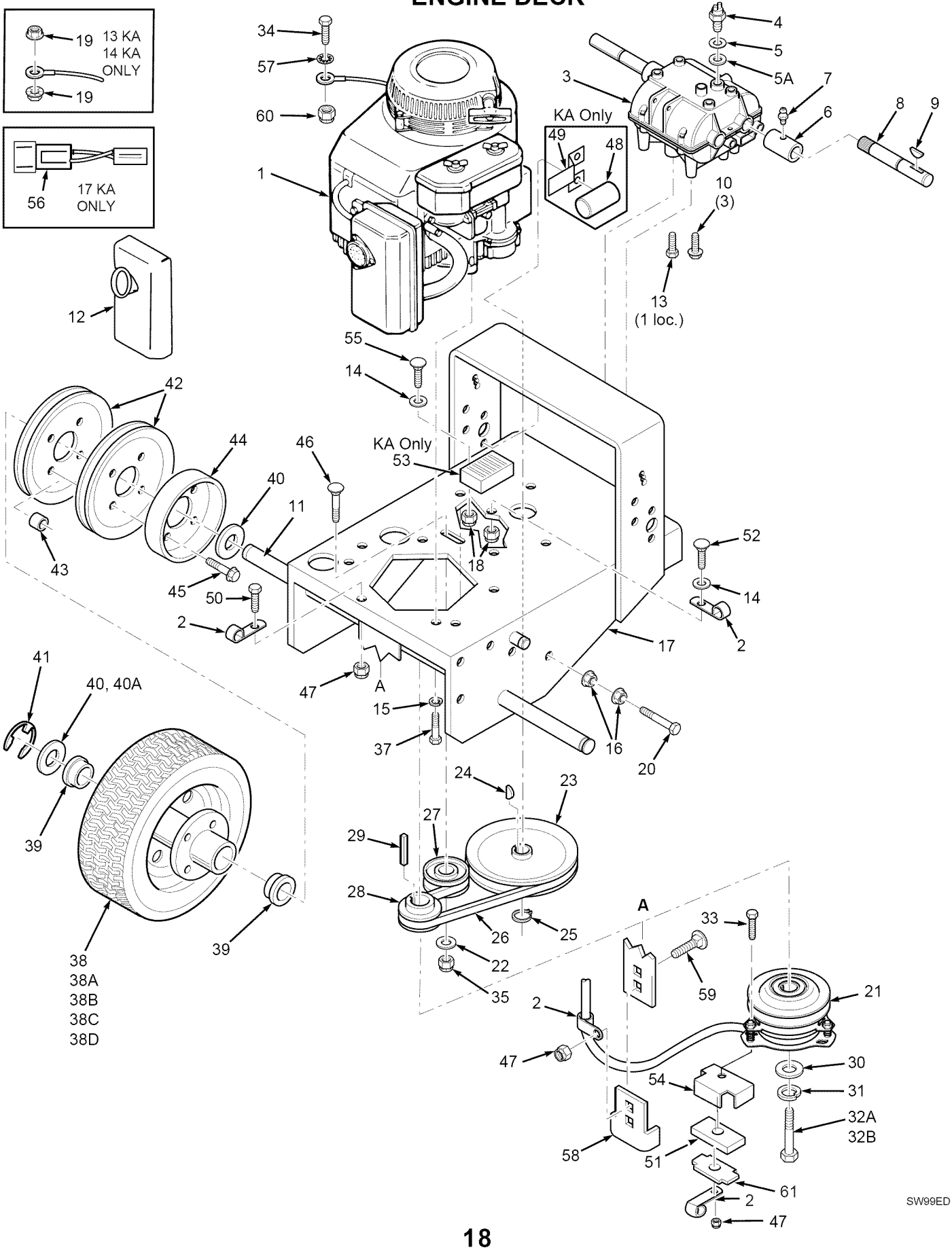


48, 52" CUTTER DECKS

Ref. No.	Part No.	Description	48	52
1	461132	Cutter Deck (Includes decals)	x	
1	461264	Cutter Deck (Includes decals)		x
2	46631	Spindle Assembly	x	x
3	43296	Spacer, Inside	x	x
4	48924	Pulley	x	x
5	481022	Tapered Bearing (Two)	x	x
6	43294	Spindle Housing	x	x
7	48114-04	Grease Fitting Str. 5/16	x	x
8	43298	Spindle Shaft, Tapered Brng	x	x
9	45037	Idler Pivot	x	x
10	04063-08	Key, 1/4 x 1/4 x 2"	x	x
11	43278	Spacer, Cutter Blade - Small	x	x
12	04001-10	Bolt, 5/16-18 x 1-1/4" Hex Head	x	x
13	04001-108	Bolt, 5/16-18 x 4-1/4" Hex Head	x	x
14	04019-03	Serrated Flange Nut, 5/16-18	x	x
15	481706	Cutter Blade 16-1/2" Marbain	x	
15	481707	Cutter Blade 18" Marbain		x
15A	481710	Cutter Blade 16-1/2 High Lift Marbain		x
15A	481711	Cutter Blade 18 High Lift Marbain		x
16	04040-10	Flatwasher,5/8" (.688 x 1.75 x .134)	x	x
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2"	x	x
18	46079	Caster Assembly, (incl.19-28 & 7)	x	x
19	04066-01	Quick Pin	x	x
20	43037-01	Spacer, Caster Yoke, 1/2" thick	x	x
21	48100-01	Bronze Bearing	x	x
22	48098	Spindle Shield	x	x
23	46082	Support Assembly, (incl. 21-23)	x	x
24	45006	Caster Yoke	x	x
25	43022	Sleeve, Caster Wheel Bearing	x	x
26	04001-37	Hex Hd Bolt, 1/2-13 x 5-1/2"	x	x
27	04021-07	Elastic Stop Nut, 1/2-13	x	x
28	48307	Wheel Assy. (incl. 29-34,81)	x	x
29	48307-02	Tire only, Caster Wheel	x	x
NS	48006-03	Inner Tube only, Caster Wheel	x	x
30	48307-04	Rim Pair, Caster Wheel	x	x
31	48006-07	Bearing Retainer, Caster Wheel	x	x
32	48006-06	Roller Bearing, Caster Wheel	x	x
33	48114-03	Grease Fitting 45 deg., 1/4-28	x	x
34	48006-05	Hub Assembly, (incl. bolts)	x	x
35	04017-16	Capscrew, 5/16-18 x 3/4"	x	x
36	461054	Discharge Chute	x	x
37	04021-04	Nut, 5/16-18 Elastic Elastic Stop	x	x
38	04001-09	Bolt, 5/16-18 x 1" Hex Head	x	x
39	46798	Belt Cover (Includes decals)	x	
39	461095	Belt Cover (Includes decals) 17KA	x	
39	46804	Belt Cover (Includes decals)		x
40	04041-07	Flat Washer, 3/8" Special	x	x
41	04029-03	Wing Nut, 3/8-16 (Large)	x	x
42	48924	Pulley	x	x
43	48926	Tapered Hub	x	x
44	04001-01	Bolt, 1/4-20 x 3/4" Hex Head	x	x
45	04020-09	Nut, 5/8-11 Hex	x	x
46	48923	Pulley, Double	x	x
47	48087	Belt, RH Blade Drive	x	
47	48285	Belt, RH Blade Drive		x
48	48089	Belt, Blade Drive	x	
48	48286	Belt, Blade Drive		x
49	04021-05	Nut, 3/8-16, Nut Centerlock	x	x
50	04019-04	Nut, 3/8-16, Serrated Flange	x	x
51	04021-09	Nut, 3/8-16 Elastic Stop	x	x
52	04004-02	Support, Belt Cover	x	x
53	04001-08	Bolt, 5/16-18 x 1/2" Hex Head	x	x
54	04017-42	Cpscrw,7/16-14 x 1"Ser Flng H Hd	x	x
55	04019-05	Nut, 7/16-14 Serrated Flange	x	x
56	04041-08	Flat Washer 3/4" Special	x	x
56A	04041-08S	Flat Washer 3/4" Special	x	x
57	44078	J-Hook	x	x
58	48181	Idler Pulley, "V" Groove	x	x
59	04050-02	Retaining Ring, 3/4" Ext."E"	x	x
60	46081	Idler Arm Assy. (Incl. 7 & 61)	x	x
61	48100-05	Bronze Bearing	x	x
62	43028	J-Rod, Idler Pulley	x	x
63	43077	Spacer, J-Rod	x	x
64	04041-12	Washer, 3/8 x 1-1/2 x 16 ga.	x	x
65	04001-46	Bolt, 3/8-16 x 2-1/4" Hex Head	x	x
66	481024	Seal, Cutter Spindle	x	x
67	46748	Idler Arm Assy (Includes 22&77)	x	x
68	43277	Spacer, J-Rod	x	x
69	48677	Reiief Fitting, Cutter Spindle	x	x
70	43312	Spacer, Outside, Cutter Spindle	x	x
71	43297	Spindle Bushing	x	x
72	481035	Nut, Cutter Spindle	x	x
73	04029-04	Wing Nut, 3/8-16 (Small) Top Side	x	x
74	04001-77	Bolt, 3/8-16 x 3-1/2" Hex Head	x	x
75	45329	Idler Pivot	x	x
76	48269	Idler Pulley, Belt Clutch	x	x
77	48100-02	Bronze Bearing	x	x
78	04050-05	Retaining Ring	x	x
79	48038	Guide Roller	x	x
80	45944	Roller Shaft	x	x
81	481025	Seal, Cutter Spindle	x	x
82	481050	Spring, Chute Return	x	x
83	48307-08	Nut, 3/8-24 Tapered	x	x

* Common hardware which should be purchased locally. All bolts are Grade 5 plated, all other fasteners zinc plated.

ENGINE DECK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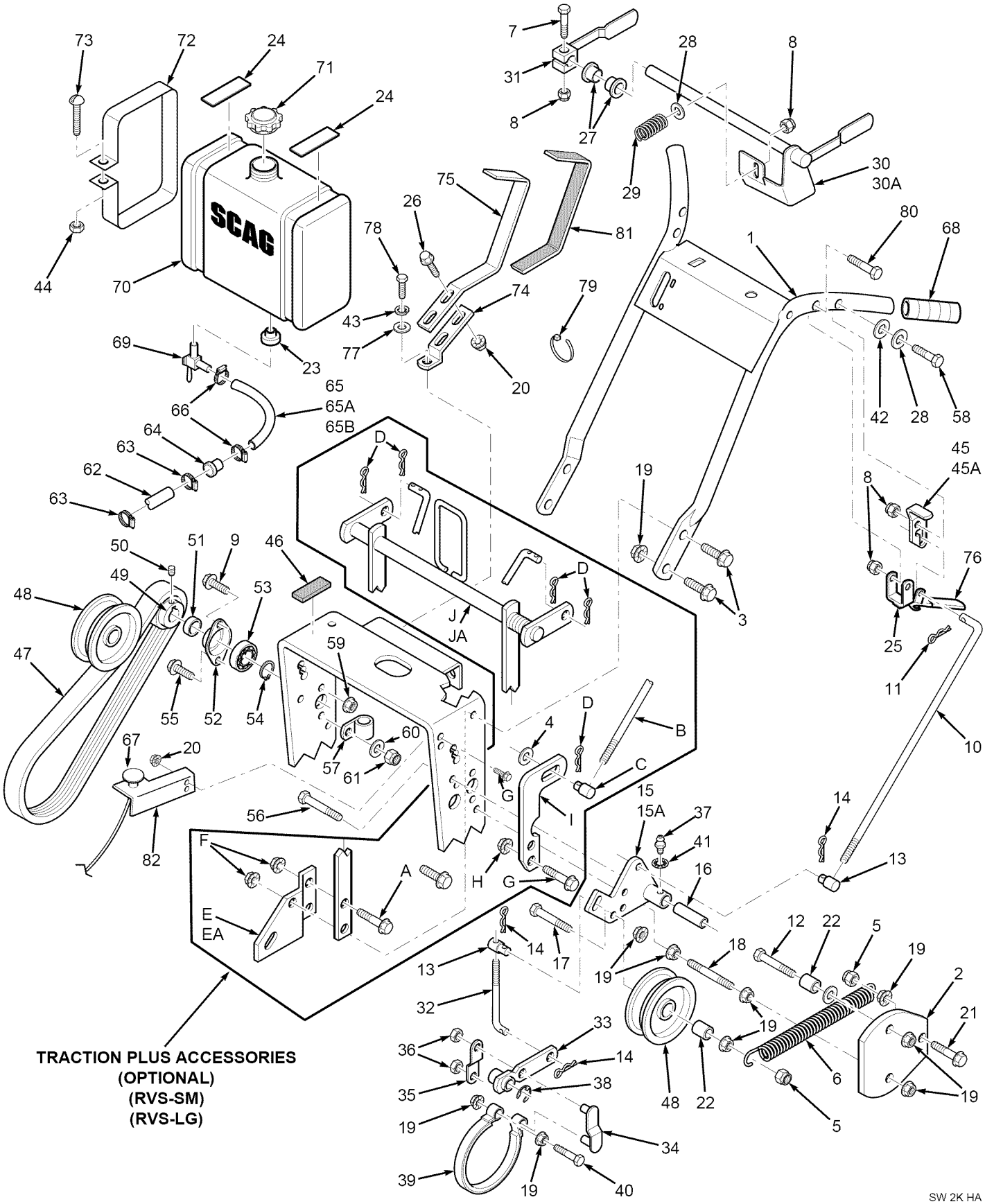
ENGINE DECK

Ref. No.	Part No.	Description	13KH 15KH	13KA 14KA	17KA
1A	481775	Engine,13HP Kohler (CV13T, SpecPS-2190)	x		
1A	481757	Engine,15HP Kohler (CV 15T, Spec PS-41581)	x		
1B	48841	Engine 12.5HP Kawasaki (Spec FB460-ES05)		x	
1B	48842	Engine, 14HP Kawasaki (FC420V)		x	
1C	481563	Engine, 17HP Kawasaki (FH500V)			x
2	48030-09	Cable Clamp	x	x	x
3	481580	Transmission, 5-speed (Peerless 700-070, 9 tooth spline)	x	x	x
4	48231	Neutral Safety Switch	x	x	x
5	48122-01	Fibre Washer, thin	x	x	x
5A	48122-02	Fibre Washer, thick	x	x	x
6	481581	Coupler, Jackshaft	x	x	x
7	48114-05	Grease Fitting, straight 1/4-28	x	x	x
8	481582	Jackshaft (fits SW32,36 & 48)	x	x	
8A	481583	Jackshaft (fits SW52,61 & 72)			x
9	04063-09	Key, Hi-Pro #9	x	x	x
10	04003-12	Bolt, 5/16-18 X 3/4" Carriage	x	x	x
11A	43100	Wheel Axle (SW 52,61,72) **		x	x
11B	43085	Wheel Axle (SW36,48) **	x	x	x
11C	43104	Wheel Axle (SW 32) **	x		
12	49070-7002	17KA Muffler (Purchase from Kawasaki)			x
13	04001-08	Bolt, 5/16-18 X 3/4" Hex Head	x	x	x
14	04040-14	Flat Washer 1/4" (.312 X .75 X .065)	x	x	x
15	04030-03	Lock Wshr. 5/16"	x	x	x
16	04019-04	Nut, 3/8-16 Serrated Flange	x	x	x
17	46764	Engine Deck (fits SW32)		x	
17A	46765	Engine Deck (fits SW36 &48)	x	x	
17B	46766	Engine Deck (fits SW52,61 & 72)			x
18	04021-08	Nut, 1/4-20 Elastic Stop	x	x	x
19	04019-03	Nut, 5/16-18 Serrated Flange		x	x
20	04001-51	Bolt, 3/8-16 x 3-3/4" Hex Head	x	x	x
21	461073	Electric Clutch (Ogura)	x	x	x
22	04041-07	Washer, 3/8" (.391 x .938 x .105)	x	x	x
23	48197	Pulley, Transmission Input	x	x	x
24	04063-07	Key, Woodruff #9	x	x	x
25	04050-09	Retaining Ring, 5/8" Ext, Basic	x	x	x
26	48203	Belt, Transmission Drive	x	x	x
27	481048	Idler Pulley, Transmission	x	x	x
28	481666	Pulley, Traction Drive	x	x	x
29	04063-19	Key, 1/4 x 1/4 x 3/4"	x	x	x
30	04041-28	Flat Washer, 7/16" Special	x	x	x
31	04030-05	Lock Washer,7/16"	x	x	x
32A	04001-101	Bolt, 7/16-20 x2-1/2" Hex Head			x
32B	04002-15	Cpsrw, M10-1.5 x55 Metric Hex Hd	x	x	
33	04001-12	Bolt, 5/16-18 x 1-3/4" Hex Head	x	x	x
34	04002-07	Bolt, M8-1.25 x 1.0	x		
35	04021-09	Nut, 3/8-16 Elastic Stop	x	x	x
36	04040-15	Flat Washer, 5/16"	x	x	x
37	04018-01	Bolt, M8-1.25 x M25 Metric Hex Hd	x	x	
38	48192	Wheel Assembly (incl. 38A-38B) (fits SW36,48,52,61,72)	x	x	x
38	48253	Wheel Assembly (incl. 38C-38D) (SW32)	x	x	
38A	48192-02	Tire, 13 x 6.50-6, 2-ply (fits SW36,48,52,61 & 72)	x	x	x
38B	48193-03	Rim & Bearing Assembly (incl. 39) (fits SW36,48,52,61 & 72)	x	x	x
38C	48253-02	Tire, 13 x 5.00-6 2-ply (SW32 only)		x	
38D	48253-03	Rim Assembly (incl. 39) (SW32 only)		x	
39	48193-02	Wheel Brng. NWC (OD 1.984-1.980)	x	x	
40	04042-05	Washer, 1-1/16 x 1-3/4 x 12 ga	x	x	x
40A	04041-14	Washer, 1-1/16 x 1-1/2 x 18 ga	x	x	x
41	04050-08	Retaining Ring, 1" Ext.- "E"	x	x	x
42	48200	Pulley, Wheel Drive	x	x	x
43	43088	Spacer, Wheel Pulley	x	x	x
44	48209	Brake Drum	x	x	x
45	04017-19	Bolt, 5/16-18 x 1-1/2" Serrated flange	x	x	x
46	04003-03	Bolt, 3/8-16 x 2" Carriage	x	x	x
47	04021-10	Nut, 5/16-18 Elastic Stop	x	x	x
48	21013-2064	Condenser (order from Kawasaki)		x	
49	422930	Bracket, Capacitor		x	
50	04001-09	Bolt, 5/16-18 x 1" Hex Head	x	x	x
51	481716	Rubber Pad, Clutch Stop	x	x	x
52	04003-02	Bolt, 1/4-20 x 3/4" Carriage	x	x	x
53	21066-2071	Rectifier (order from Kawasaki)		x	
54	422533	Backing Plate	x	x	x
55	04001-59	Bolt, 1/4-20 x 1-1/4"	x	x	
56	481717	Wire Harness Adapter, 17KA			x
57	04031-09	Lock Washer Internal Tooth	x	x	x
58	421370	Anti Rotation Bracket	x	x	x
59	04003-04	Bolt, 5/16-18 x 1" Carriage	x	x	x
60	04021-08	Nut, 1/4-20 Elastic Stop	x	x	x
61	422534	Plate, Backing	x	x	x

** = Requires welding onto chassis.

* Common hardware which should be purchased locally. All bolts are Grade 5 plated, all other fasteners zinc plated.

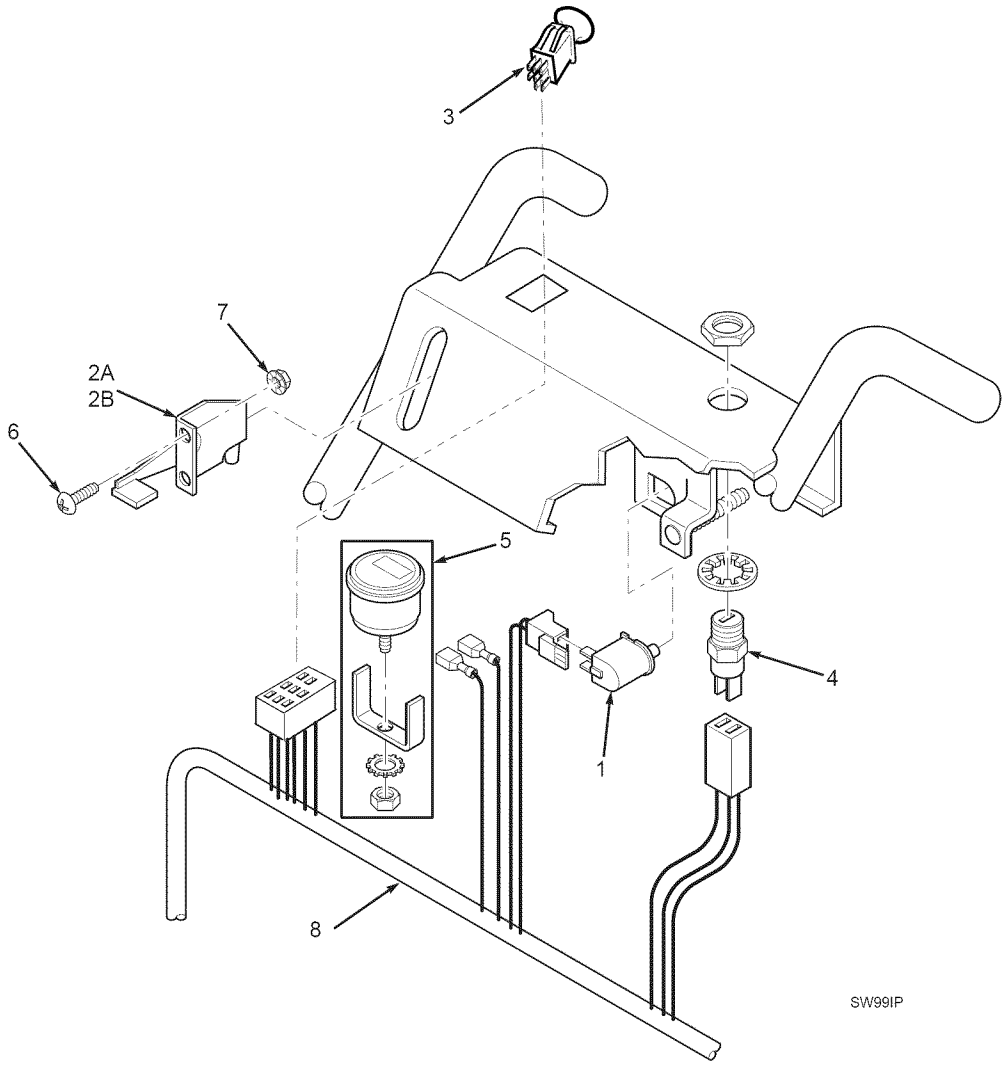
HANDLE ASSEMBLY



HANDLE ASSEMBLY

Ref. No.	Part No.	Description	13KH 15KH	13KA 14KA	17KA
1	461126	Handle Assembly (Fits SW 36,48)	x	x	
1	46856	Handle Assembly (Fits SW52,61,72)	x	x	x
2	421360	Belt Guard	x	x	x
3	04017-27	Capscrw, 3/8-16 x 1" Ser. Flange	x	x	x
4	04041-07	Washer, 3/8" (.391 x .938 x .105)	x	x	x
5	04021-09	Nut, 3/8-16 Elastic Stop	x	x	x
6	48755	Spring, Idler	x	x	x
7	04001-10	Bolt, 5/16-18 x 1-1/4" Hex Head	x	x	x
8	04021-10	Nut, 5/16-18 Elastic Stop	x	x	x
9	04017-05	Capscrew, 1/4-20 x 3/4" Hex Head	x	x	x
10	44004	Control Rod, Steering	x	x	x
11	04062-02	Hair Pin, Small	x	x	x
12	04001-23	Bolt, 3/8-16 x 4-1/2" Hex Head	x	x	x
13	43032	Swivel Joint	x	x	x
14	04062-01	Hair Pin, Large .094 Diameter	x	x	x
15	45847	Idler Bracket, RH	x	x	x
15A	45846	Idler Bracket, LH	x	x	x
16	43092	Idler Sleeve	x	x	x
17	04001-62	Bolt, 3/8-16 x 3/4" Hex Head	x	x	x
18	04004-17	Support Belt Guard	x	x	x
19	04019-04	Nut, 3/8-16 Serrated Flange	x	x	x
20	04019-03	Nut, 5/16-18 Serrated Flange	x	x	x
21	04017-28	Cpscrw, 3/16-18 x 1-1/4" Ser. Flng.	x	x	x
22	43286	Spacer	x	x	x
23	48309	Bushing	x	x	x
24	48292	Rubber Pad, (Upper)	x	x	x
25	46089	Steering Lever	x	x	x
26	04017-17	Capscrew, 5/16-18 x 1" Ser. Flng.	x	x	x
27	48312	Bushing	x	x	x
28	04040-15	Washer, 5/16 (.375 x .875 x .083)	x	x	x
29	48951	Spring, Operator Presence	x	x	x
30	45573	Operator Presence Lever, LH (Small Frame)	x	x	
30A	45571	Operator Presence Lever, LH (Large Frame)	x	x	x
31	45572	Operator Presence Lever, RH	x	x	x
32	44005	Brake Rod	x	x	x
33	45092	Brake Lever	x	x	x
34	45093	Brake Link	x	x	x
35	42254	Brake Link Plate	x	x	x
36	04024-01	Nut, 3/8 Push-on	x	x	x
37	48114-05	Grease Fitting, Straight 1/4-28	x	x	x
38	04050-01	Retaining Ring, 5/8 Ext. "E"	x	x	x
39	48210	Brake Band	x	x	x
40	04001-45	Bolt, 3/8-16 x 2" Hex Head	x	x	x
41	04031-08	1/4" Internal Tooth Lockwasher	x	x	x
42	04032-01	Curved Spring Washer	x	x	x
43	04015-13	Socket Head Capscrew #8-32 x 1/2"	x	x	x
44	04020-02	Nut, 1/4-20 Hex	x	x	x
45	461242	Neutral Latch, RH	x	x	x
45A	461241	Neutral Latch, LH	x	x	x
46	48205	Rubber Pad (Lower)	x	x	x
47	48202A	Belt, Wheel Drive	x	x	x
48	48198	Idler Pulley, Wheel Drive	x	x	x
49	48199	Pulley, Jackshaft (Inc. 50)	x	x	x
50	04012-04	Setscrew, Hex Socket Knurl Cup Pt. 5/16-18 (nylock)	x	x	x
51	43098	Spacer, Jackshaft Pulley	x	x	x
52	48223	Flange, Jackshaft Bearing	x	x	x
53	48224	Bearing, Jackshaft	x	x	x
54	04050-09	Retaining Ring, 5/8 Ext. Basic	x	x	x
55	04017-06	Capscrew, 1/4-20 x 1" Ser. Flange	x	x	x
56	04003-01	Bolt, 1/4-20 x 6" Carriage			x
57	48030-09	Clamp	x	x	x
58	04001-17	Bolt, 5/16-18 x 2" Hex Head	x	x	x
59	04019-02	Nut, 1/4-20 Serrated Flange	x	x	x
60	04040-15	Flatwasher, 5/16 (.375 x .875 x .083)		x	x
61	04021-02	Nut, 1/4-20 Elastic Stop	x	x	x
62	48179	Fuel Hose 7/32 ID x 3.5"(Kaw. Only)		x	
63	48059-02	Fuel Hose Clamp (Kaw. Only)		x	
64	48057-02	Fuel Filter (Kawasaki Only)		x	
65	48058	Fuel Hose,1/4"ID, 10" (KH Only)	x		
65A	48058	Fuel Hose,1/4"ID, 20" (Kaw.)		x	x
66	48059-01	Clamp, Fuel Hose	x	x	x
67	481072	Choke Control			x
68	48159	Grip, Handle	x	x	x
69	48308	Valve, Fuel Shut Off	x	x	x
70	46174	Fuel Tank Assy.(Incl. Bush. & Val.)	x	x	x
71	481603	Fuel Tank Cap	x	x	x
72	421239	Strap, Fuel Tank	x	x	x
73	04010-10	Screw, 1/4-20 x 2" Rnd Hd Slotted	x	x	x
74	422279	Shift Lever	x	x	x
75	461163	Shift Lever Extention (incl. 81)	x	x	x
76	48144	Grip, Steering Lever	x	x	x
77	04041-07	Washer, 3/8 (.391x .938 x .105)	x	x	x
78	04020-14	Nut, 3/8-24 UNF	x	x	x
79	48028-05	Cable Tie	x	x	x
80	04001-53	Bolt, 5/16-18 x 2-1/2"	x	x	x
81	481839	Grip, Shift Handle	x	x	x
82	421622	Bracket, Choke Mt. (Kaw. 17)	x	x	x
		Traction Plus Accessories (Optional), RVS-SM & RVS-LG			
A	04017-27	Capscrew, 3/8-16 x 1" Ser. Flng	x	x	x
B	44098	Rod, Traction Control	x	x	x
C	43032	Swivel Joint	x	x	x
D	04062-01	Hair Pin, Large .094 Dia.	x	x	x
E	421372	Mounting Brkt. LH Traction Cont.	x	x	x
EA	421373	Mounting Brkt. RH Traction Cont.	x	x	x
F	04019-04	Nut, 3/8-16 Serrated Flange	x	x	x
G	04017-16	Capscrew, 5/16-18 x 3/4" Ser. Flg.	x	x	x
H	04019-03	Nut, 5/16-18 Serrated Flange	x	x	x
I	421428	Traction Lever, LH	x	x	x
IA	421429	Traction Lever, RH	x	x	x
J	45554	Traction Lever Wldmnt. (Small Fm.)	x	x	
JA	45555	Traction Lever Wldmnt. (Large Fm.)	x	x	x

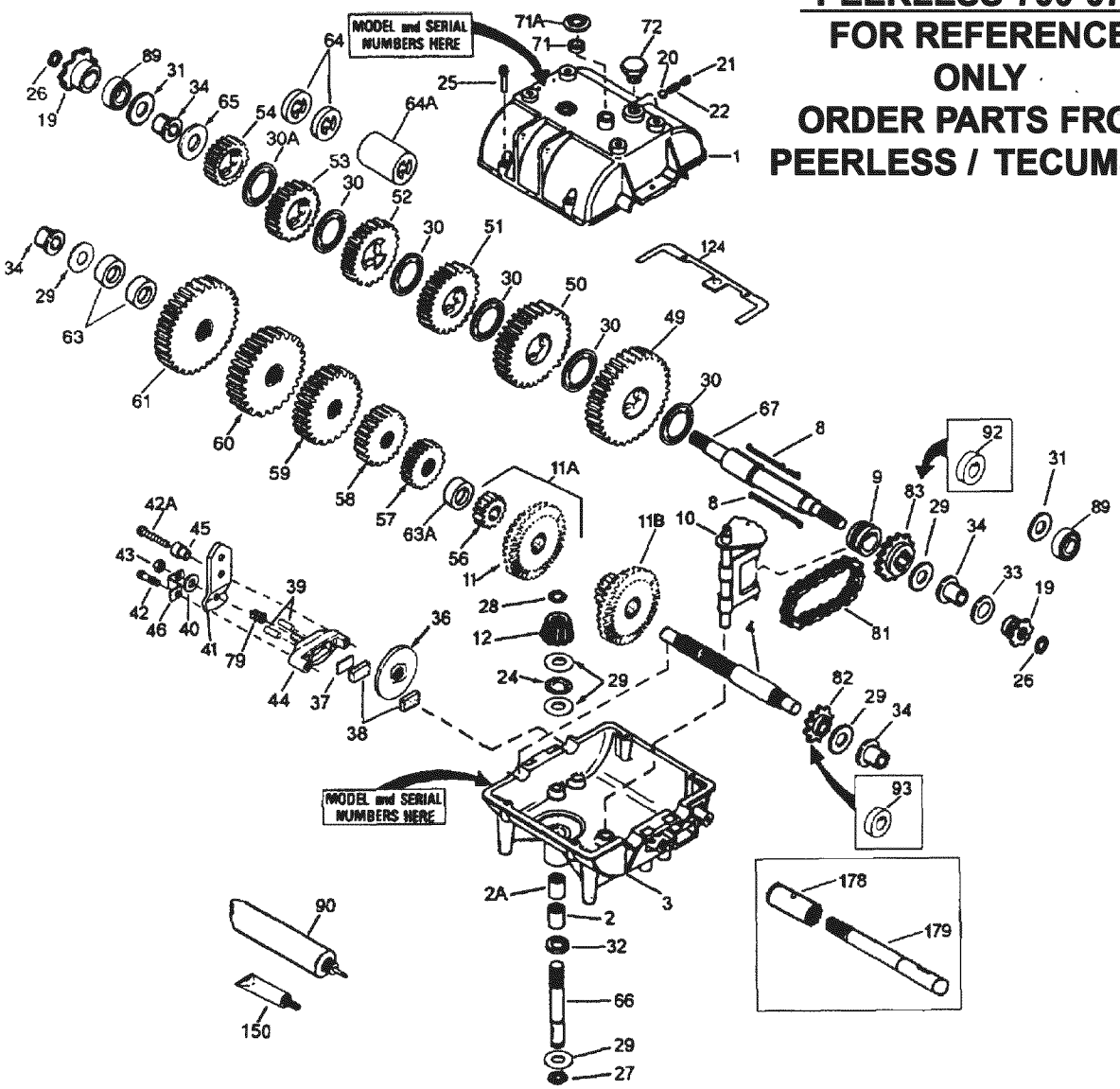
INSTRUMENT PANEL



Ref. No.	Part No.	Description	13KH 15KH	13KA 14KA	17KA
1	48717	Switch, Neutral Interlock	x	x	x
2A	481071	Throttle Control	x	x	
2B	48946	Throttle Control (17KA)			x
3	481687	Engagement Switch, Electric Clutch	x	x	x
4	48609	Key Switch (Includes hardware)	x	x	x
5	48023	Hour Meter (dealer installed)	x	x	x
6	*	Screw, #10-32 x .50 Phillips Washer Head	x	x	x
7	04019-01	Nut, #10-32 Serrated Flange Hex Head	x	x	x
8	481678	Handle Wire Harness, Manual Start	x	x	x
NS	48030-09	Clamp, Wire Harness	x	x	x

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plated.

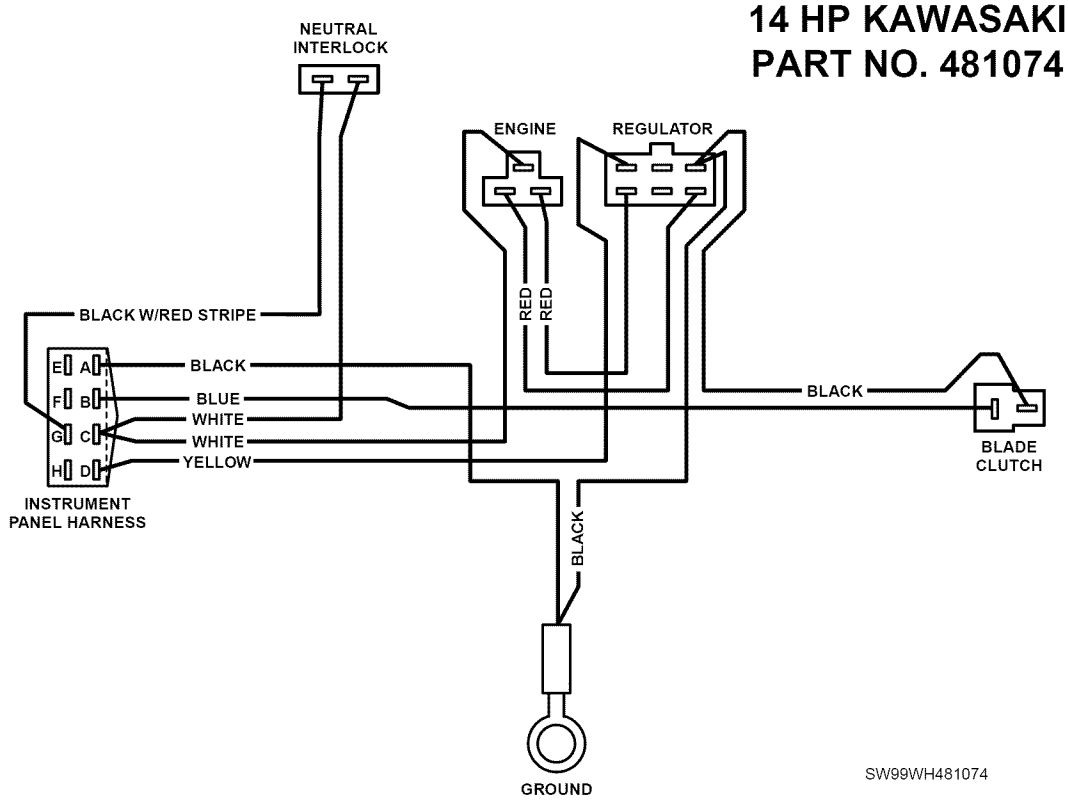
PEERLESS 700-070
FOR REFERENCE ONLY
ORDER PARTS FROM PEERLESS / TECUMSEH



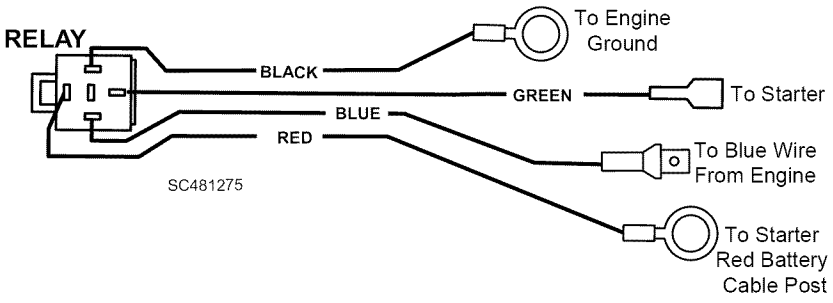
Ref. No.	Part No.	Description
1	772083A	Case, Transmisson
2	780086A	Needle Bearing Grease Spec
2A	780142	Needle Bearing
3	770061A	Case, Transmission
8	792089A	Shift Key
9	784266	Shift Collar
10	784376	Shift Rod & Fork
11	778154	Bevel Gear (42 teeth)
12	778176	Bevel Pinion (14 teeth-steel)
20	792077	Steel Ball, 5/16" dia.
21	792078	Set Screw, 3/8-16 x 3/8"
22	792079	Spring
24	780071	Thrust Bearing
25	792073	Screw, 1/4-20 x 1-1/4" (6)
27	792035	Retaining Ring
28	788040	Retaining Ring
29	780072	Washer (6)
30	780108	Washer (5)
32	792001	"O" Ring
34	780105A	Flanged Bushing
49	778146A	Spur Gear (37 teeth)

REF. NO.	PART NO.	DESCRIPTION
50	778125	Spur Rear (35 teeth)
51	778239A	Spur Gear (32 teeth-steel)
52	778124A	Spur Gear (30 teeth)
53	778123A	Spur Gear (25 teeth)
56	778145	Spur Gear (12 teeth-steel)
57	778151	Spur Gear (15 teeth)
58	778240	Spur Gear (18 teeth-steel)
59	778126A	Spur Gear (20 teeth)
60	778127A	Spur Gear (25 teeth)
65	780139	Washer
66	776135	Input Shaft (3-11/16" long)
67	776402	Shifter & Brake Shaft
71	788069	Square Cut Ring
72	792074	Threaded Plug (Shipping only, not used)
81	786081	Roller Chain (No. 41 chain, 24 links)
82	786082	Sprocket (9 teeth)
83	786083	Sprocket (18 teeth)
90	788067B	Grease (32 oz. bottle Bentonite grease)
150	510334	Gasket Eliminator (Loctite #515)
178	*	Coupling (See page 18-19 for part number)
179	*	Connector Shaft (See page 18-19 for part number)

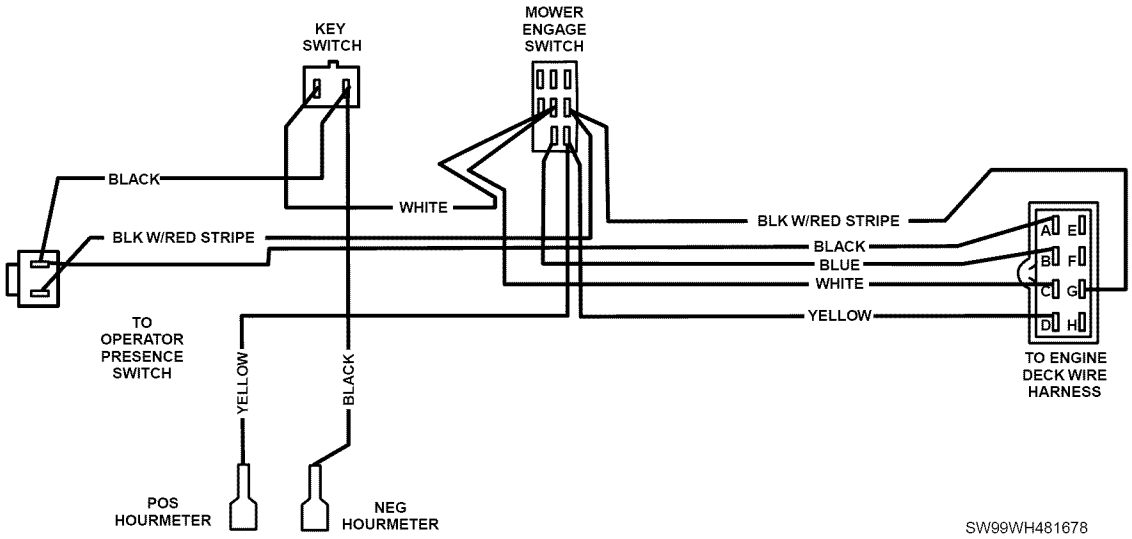
ENGINE DECK WIRE HARNESS - 14 HP KAWASAKI PART NO. 481074



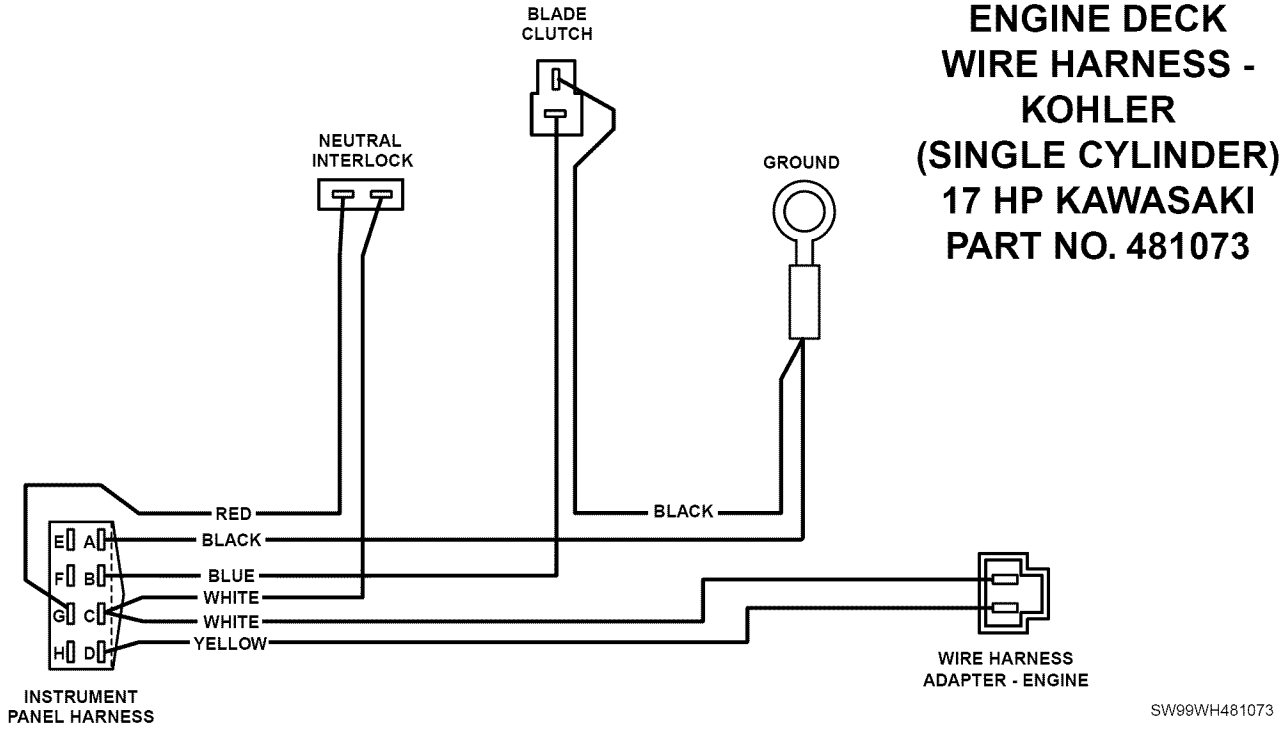
WIRE HARNESS WITH RELAY PART NO. 481275

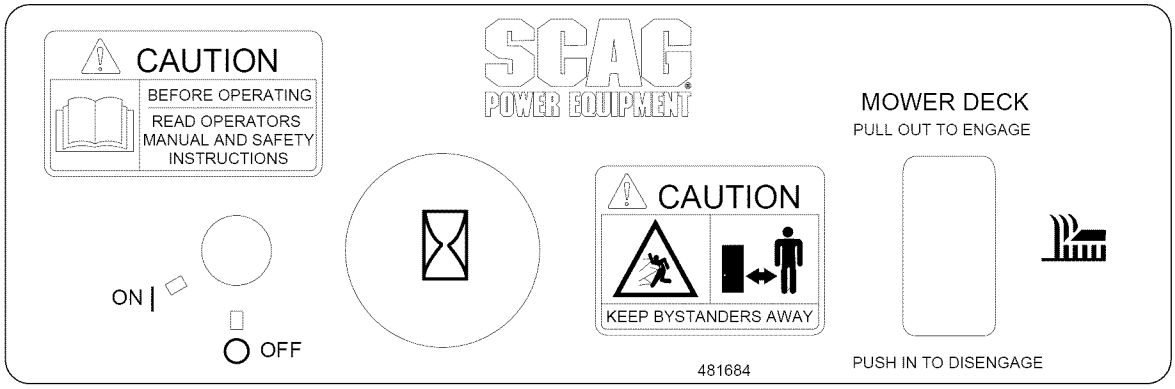


HANDLE WIRE HARNESS - MANUAL START PART NO. 481678

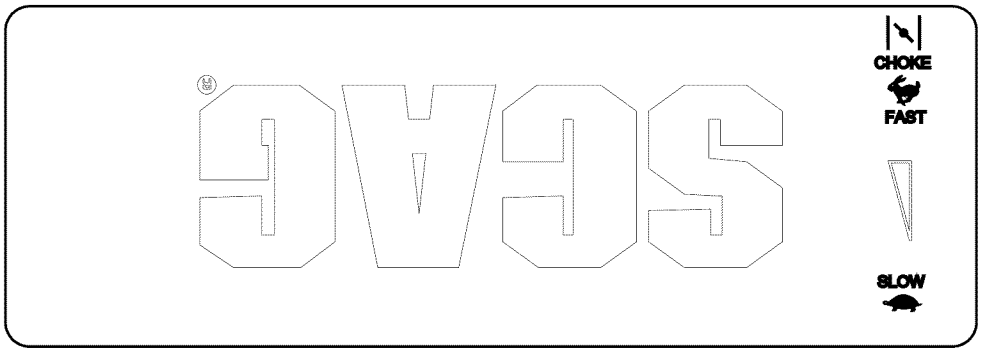


ENGINE DECK WIRE HARNESS - KOHLER (SINGLE CYLINDER) 17 HP KAWASAKI PART NO. 481073





481684



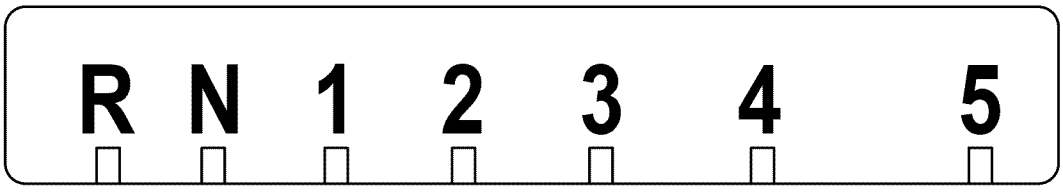
481122

48

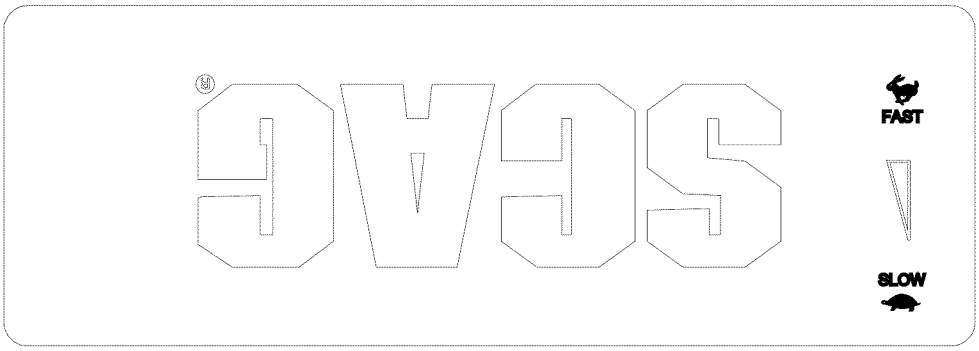
32" - 48315
36" - 48316
48" - 48318
52" - 48319

WARNING
ROTATING BLADES AND BELTS
• KEEP HANDS, FEET & CLOTHING CLEAR
• KEEP ALL GUARDS IN PLACE
• SHUT OFF ENGINE & DISENGAGE BLADE CLUTCH BEFORE SERVICING
• CLEAR AREA OF DEBRIS BEFORE MOWING
• USE CAUTION IN DIRECTING DISCHARGE
• KEEP BYSTANDERS, CHILDREN & PETS AWAY
• READ INSTRUCTION MANUAL BEFORE OPERATING
DO NOT OPERATE WITHOUT DISCHARGE CHUTE, MULCHING KIT, OR ENTIRE GRASS CATCHER INSTALLED
481040

481040



48332



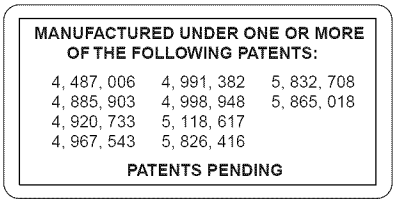
481483

48071

48404

481971

481039



48656

481109

LIMITED WARRANTY-COMMERCIAL EQUIPMENT

Any part of the Scag commercial mower manufactured by Scag Power Equipment and found, in the reasonable judgment of Scag, to be defective in materials or workmanship, will be repaired or replaced by an Authorized Scag Service Dealer without charge for parts and labor. This warranty is limited to the original purchaser and is not transferable. Proof of purchase will be required by the dealer to substantiate any warranty claims. All warranty work must be performed by an Authorized Scag Service Dealer.

This warranty is limited to the following specified periods from the date of the original retail purchase for defects in materials or workmanship:

* Wear items including drive belts, blades, hoses and tires are warranted for 90 days.
* Batteries are warranted for 90 days.
* Frames, decks, and structural components including oil reservoirs and oil coolers are warranted for 1 year.
* Engines and electric starters are warranted by the manufacturer's warranty period.
* Hydro-Gear® drive components are warranted by Hydro-Gear, Sullivan, IL.
* Drive system components are warranted for 1 year by the component manufacturer, in conjunction with Scag Power Equipment. (Excluding fittings, hoses, cooling systems, oil reservoirs, and drive belts).
* Electric clutches have a Limited Warranty for 2 years (parts & labor 1st year; parts only 2nd year).
* Cutter Spindle Assemblies 46631 have a Limited Warranty for 3 years (parts and labor 1st year; parts only 2nd and 3rd years).

Any Scag product used for rental purposes is warranted by a 90-day warranty period.

The Scag mower, including any defective part must be returned to an Authorized Scag Service Dealer within the warranty period. The expense of delivering the mower to the dealer for warranty work and the expense of returning it to the owner after repair will be paid for by the owner. Scag's responsibility is limited to making the required repairs and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag mower.

This warranty does not cover any mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual. The warranty does not apply to any damage to the mower that is the result of improper maintenance, or to any mower or parts that have not been assembled or installed as specified in the Operator's Manual and Assembly Manual. The warranty does not cover any mower that has been altered or modified, changing performance or durability. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability.

Scag Power Equipment reserves the right to change or improve the design of any mower without assuming any obligation to modify any mower previously manufactured.

All other implied warranties are limited in duration to the one (1) year warranty period or ninety (90) days for mowers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one year or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the mower to an Authorized Scag Service Dealer and expense of returning it to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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DIVISION OF METALCRAFT OF MAYVILLE, INC.

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